
THE ZURGENA RAILWAY NEWS

January 19th 2021

Nº 3



This edition's photo is a very rare one of Almajalejo Station before its destruction. The steps are still there but not much else. On the left one can see the toilets which were an accompaniment to all of the GSSR stations. Almajalejo was important as a braking point between Zurgena and Huércal Overa as this section caused difficulties due to the inclines, especially for the iron ore trains from Serón and Los Canos. If you are interested in The GSSR, a visit to Serón is recommended as these loading points kept The GSSR solvent through many difficult times.

Well, we are locked down again so little activity can be seen to be happening at the moment, but be sure that there is activity behind the scenes.

On the subject of 'behind the scenes' - we are looking into buying all of the trackside artifacts from ADIF such as signals, points levers etc and this is progressing now. I will be in the process of identifying all of these items so that the museum can make an offer to ADIF.

PUZZLES

Well, the puzzles that I reprinted in the last edition gave me some headaches! I have to admit to having struggled badly with these, and one has to admire the intelligence and intellectual skills of our forebears. Anyway, here are some answers that I have cobbled together. I am not saying that they are right, but they are the best that I can come up with having failed A Level Maths with Physics miserably.

ANSWERS:

A special goods train leaves Baza with X tons of various goods. In Serón it unloads half of the load plus half a ton more. In Albox (Almanzora) it unloads half of the remainder and half a ton more, and in Huércal it unloads like before, half of the remainder plus half a ton more. It arrives at Almendricos with five tons on board. How many tons of goods did it have when it left Baza?

The way to work this is backwards.....

When it arrived at Almendricos it had 5 tons on board - given in the question.

When it arrived at Huércal it had double (5 + 0.5) tons (11 tons) - mentally put the half ton back on the train and double it.

When it arrived at Albox it had double (11 + 0.5) tons (23 tons).

When it arrived at Serón it had double (23 + 0.5) tons (47 tons).

So, it left Baza with 47 tons of goods.

Now do it the right way round.....

- * -

A locomotive leaves Lorca in the direction of Baza with a wheel that has a radius of 25cm and revolves 5 times per second.

How long will it take to travel 143,767.47 metres? (143Km, 767m, 470mm).

So, we need to use Pi to calculate the circumference of the wheel. Pi x radius x 2:

$$3.14159 \times 50\text{cm} = 157.0796$$

It revolves 5 times per second:

$$157.0796 \times 5 = 785.398 \text{ centimetres per second.}$$

$$= 7.85398 \text{ m/s.}$$

$$= 471.2389 \text{ m/minute.}$$

$$= 28,274 \text{ m/hr.}$$

$$= 28.274 \text{ Km/hr.}$$

$$143,767.47 \text{ divided by } 28.274$$

$$= 5 \text{ hours remainder } 84.794 \text{ thousandths of an hour.}$$

There are 60 x 60 seconds in an hour = 3,600 seconds.

$$84.794 \text{ thousandths of an hour} = 3,600 / 84.794 = 42.46 \text{ seconds.}$$

Answer: 5 hours 0 minutes 42.46 seconds.

According to Señor Cuenca, the answer is 5 hours, 5 minutes and 8 seconds. I would love someone to explain this to me.

- * -

A businessman who had a consignment of 144 tons of esparto in the goods shed in Lorca Station requested that it be loaded onto a certain number of wagons but the company also had to deal with the transport of other goods, so they supplied two wagons less than the businessman requested. Therefore he decided to load an extra ton of esparto into each of the wagons available to him to the extent that all of the esparto was loaded. How many wagons did he request originally?

Answer: 18 wagons. If anyone can show their working, I'll be enormously impressed because I couldn't.

- * -

An employee of this company invested a sum of money in a building society, receiving an interest of 6% per annum (if only!!). After 12 years he received 523.18 pesetas, being the capital and the accumulated interest over the said period of time.

How much did the employee originally invest?

NOTE: To be able to calculate the original investment, one has to remember that the amount produced by the capital due to the percentage stated is added in the following year and that the successive years will accumulate in the same way. (Compound interest).

Answer:

$$1 - 260 + 6\% = 275.6$$

$$2 - 275.6 + 6\% = 292.136$$

$$3 - 292.136 + 6\% = 309.664$$

$$4 - 309.664 + 6\% = 328.244$$

$$5 - 328.244 + 6\% = 347.939$$

$$6 - 347.939 + 6\% = 368.815$$

$$7 - 368.815 + 6\% = 390.9439$$

$$8 - 390.9439 + 6\% = 414.400$$

$$9 - 414.400 + 6\% = 439.265$$

$$10 - 439.265 + 6\% = 465.620$$

$$11 - 465.620 + 6\% = 493.558$$

$$12 - 493.558 + 6\% = 523.17$$

I admit that I had to look up the answer and work it forward. To think that they had no calculators in those days, just slide rules and pencils and paper!!

- * -

A locomotive with a motive force of 305HP of steam pulls a train of 127,360Kg up a slope of 3% (1 in 33.33) and travels 70Km in two hours.

What motive power would another locomotive need on the same route with the same train to travel 140km in two hours 30 minutes?

Firstly, the distance is twice the original, but the time required is $2 / 2.5$ so:

$$305 \times 2 \times 2 / 2.5 = 488\text{HP}$$

Their answer is 765.5HP.

Any comments?

None of the original answers show working or have explanations.

All just a bit of fun.

So, just one more for this edition, from July 1917 (one would think that they had enough to worry about with a war tearing Europe apart). It is similar to a previous problem, but hopefully will be a bit of fun for some of you cerebral types.

A wagon leaves Almendricos with a variety of items and with X number of bags and packages in the direction of Purchena, discharging in the following stations: In Las Norias it unloaded a half of the packages that it was carrying, and a half more [Note: this means the packages plus half again]; in Huércal Overa it unloaded a half and a half more; in Zurgena it unloaded a half and a half more of what was left; in Almanzora it unloaded 16 bags and a certain number of packages; in Cantoria it unloaded a half and a half more of the packages that were left and in Fines-Olula it unloaded a half and a half more. On arrival at its destination it unloaded the last package(s) that was/were left in the wagon.

How many bags and packages were distributed during the journey?

I hope that all of you are keeping safe.

Regards

Max